

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Original) An isolated polynucleotide comprising an s-ship promoter capable of promoting transcription operably connected to a heterologous nucleic acid sequence.
- 2.-3. (Canceled)
4. (Currently Amended) The isolated polynucleotide of claim ~~[[3]]~~ 1, wherein the promoter comprises at least 100 nucleotides from SEQ ID NO:1 , SEQ ID NO:2, SEQ ~~[[E]]~~ ID NO:3, SEQ ID NO:4, or SEQ ID NO:5.
5. (Canceled)
6. (Currently Amended) The isolated polynucleotide of claim ~~[[5]]~~ 1, wherein the promoter comprises at least 1000 nucleotides from SEQ ID NO:1 , SEQ ID NO:2, or SEQ ID NO:5.
7. (Original) The isolated polynucleotide of claim 6, wherein the promoter comprises at least 5000 nucleotides from SEQ ID NO:1 , SEQ ID NO:2, or SEQ ID NO:5.
8. (Currently Amended) The isolated polynucleotide of claim 7, wherein the promoter comprises ~~about~~ at least 6.3 kilobases from SEQ ID NO:1 or SEQ ID NO:5.
9. (Currently Amended) The isolated polynucleotide of claim 8, wherein the promoter comprises ~~about~~ at least 7.6 kilobases from SEQ ID NO.1 or SEQ ID NO:5.
10. (Currently Amended) The isolated polynucleotide ~~[[e]]~~of claim 1 , comprising a sequence that hybridizes under stringent conditions to the complement of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4 or SEQ ID NO:5.

11. (Original) The isolated polynucleotide of claim 10, comprising SEQ ID NO:2, SEQ ID NO:3, SEQ E) NO:4 or SEQ E) NO:5.
12. (Original) The isolated polynucleotide of claim 1, wherein the promoter is capable of promoting tissue-specific transcription.
13. (Canceled)
14. (Currently Amended) The isolated polynucleotide of claim [[13]] 1, comprising a sequence that can hybridize under stringent conditions to nucleic acid segment comprising the complement of i) at least 50 contiguous nucleic acids of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, or SEQ ID NO:5.
15. (Original) A nucleic acid comprising a promoter operably attached to a nucleic acid sequence from an s-ship gene or a portion thereof and a marker sequence, wherein the s-ship gene is disrupted by the marker sequence.
16. (Original) The nucleic acid of claim 15, wherein the promoter is an s-ship promoter.
17. (Original) The nucleic acid of claim 15, wherein the promoter is constitutive.
18. (Original) The nucleic acid of claim 15, wherein the promoter is inducible or conditional.
19. (Original) An expression cassette comprising an s-ship promoter operably connected to a heterologous nucleic acid segment.
20. (Original) The expression cassette of claim 19, wherein the heterologous nucleic acid segment encode a protein.
21. (Original) The expression cassette of claim 20, wherein the nucleic acid segment is a reporter gene.
22. (Original) The expression cassette of claim 21, wherein the reporter gene encodes a gene product that is colorimetric, enzymatic, luminescent, or fluorescent.

23. (Original) The expression cassette of claim 19, wherein the nucleic acid segment encodes a therapeutic or diagnostic gene product.

24.-28. (Canceled)

29. (Original) A vector comprising an s-ship promoter.

30. (Original) The vector of claim 1, wherein the s-ship promoter is operably attached to a nucleic acid segment.

31. (Original) The vector of claim 30, wherein the nucleic acid segment is all or part of an s-ship coding sequence.

32. (Original) The vector of claim 30, wherein the nucleic acid segment is heterologous.

33. (Original) The vector of claim 29, wherein the vector is a plasmid, YAC, BAC, or virus.

34. (Original) The vector of claim 29, comprised in a pharmaceutically acceptable formulation.

35. (Currently Amended) A host cell comprising ~~an s-ship promoter operably attached to a heterologous nucleic acid segment~~ the expression cassette of claim 19.

36. (Canceled)

37. (Currently Amended) The host cell of claim ~~[[36]]~~ 35, wherein the host cell is an embryonic cell.

38. (Canceled)

39. (Currently Amended) The host cell of claim ~~[[36]]~~ 35, wherein the host cell is a hematopoietic cell.

40. (Currently Amended) The host cell of claim ~~[[36]]~~ 35, wherein the host cell is a stem or progenitor cell.

41.-44. (Canceled)

45. (Original) A mammal having cells comprising an s-ship transgenic sequence.

46. (Original) The mammal of claim 45, wherein the s-ship transgenic sequence comprises a s-ship1 coding sequence flanked by loxP sequences.

47. (Original) The mammal of claim 46, further comprising a heterologous nucleic acid sequence encoding a Cre recombinase.

48. (Original) The mammal of claim 47, wherein the nucleic acid sequence encoding the Cre recombinase is under the control of an inducible or conditional promoter.

49. (Canceled)

50. (Original) A method of screening for a candidate substance that regulates activity of the s-ship1 promoter comprising a step selected from the group consisting of: (a) contacting a nucleic acid comprising an s-ship promoter with an s-ship promoter binding protein and the candidate substance under conditions that allow binding between the protein and the promoter and determining whether the candidate compound modulates the binding between the protein and the promoter; and (b) contacting the candidate substance with a cell comprising the s-ship promoter operably attached to a reporter gene coding for an expression product and assaying for expression of the reporter gene expression product.

51. (Original) A method for identifying stem cells in a population of cells comprising: (a) administering to cells in the population a nucleic acid comprising an s-ship promoter operably attached to a reporter gene.

52. (Original) The method of claim 51, wherein the cells are in an organ.

53. (Original) The method of claim 51, wherein the cell are in an animal.

54. (Original) The method of claim 51, further comprising sorting cells based on expression of the reporter gene.

55. (Original) A method for screening for a modulator of cell function comprising: a) transfecting a stem or hematopoietic cell with an expression cassette comprising an s-ship promoter operably attached to a nucleic acid encoding a candidate modulator; and, b) assaying the cell for a cell function, wherein a difference in cell function in the cell as compared to a cell in the absence of the candidate modulator is indicative of a modulator.

56. (Original) The method of claim 55, wherein the modulator is a candidate therapeutic agent for the treatment of a blood-related disease or condition.

57.-76. (Canceled)